REMARKS

Claims 7-10 and 12-16 were rejected under 35 U.S.C. § 102(b) as anticipated by Kobayashi. Applicants respectfully traverse this rejection. The office action stated that the claimed invention is disclosed by Kobayashi, Fig. 1. Claims 7-10, 12 and 16 now require "a metal thin film resistive layer directly attached to the substrate." Claims 13-15 now require "a nickel-chromium alloy thin film layer directly attached to the substrate." Claims 7, 13, 15 and 16 are amended to include the "directly" attached language. Support for this amendment is found in Fig. 2. In all claims, the resistive element is a metal. In Kobayashi, Figure 1, the heating resistant layer is made of tantalum nitride, a non-metal. Therefore Kobayashi can not anticipate.

Furthermore, although Kobayashi does show a layer of nickel-chromium alloy in Fig. 1, this layer acts as an electrode and is overlaid with gold, a conductive metal. In contrast, in the present invention, a passivation layer (non-metal, claims 14-16) or an outer moisture barrier (non-metal, claims 7-13) overlays the nickel chromium alloy or metal thin film resistive layer. Therefore, the layered structure in Kobayashi is different from that disclosed in the present application and Kobayashi can not anticipate.

Kobayashi, in the Background of the Invention (col. 1, lines 40-50), discloses a thermal head with a heating resistive layer made of nichrome (NiCr). However, the structure differs from that of the present invention because it includes a grazed layer in between the substrate and the heating resistor layer. A grazed layer is distinct from a substrate layer (Kobayashi co. 1, lines 41-42; col. 3, lines 9-10). The present invention does not claim or include a grazed layer. In the present invention, the metal thin film resistive layer (or the nickel-chromium alloy thin film layer) is attached directly to the substrate rather than to a grazed layer. Of course, Kobayashi relates to a different type of invention – a thermal head as opposed to a chip resistor. That is why

Kobayashi would have a grazed layer and the present invention does not. To further clarify the different context of the present invention, claims 7, 13, 15-16 have been amended to make clear that each termination is a "chip resistor termination." Support for this amendment is found at least at page 5, lines 27-33 of the specification. Kobayashi of course does not disclose a "chip resistor termination."

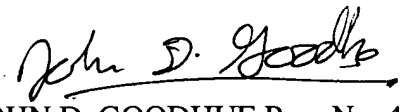
Claims 7 and 12 were rejected under 35 U.S.C. § 102(b) as anticipated by Nishiguchi et al. Applicants respectfully traverse this rejection. The office action stated that the invention is disclosed by Nishiguchi, Fig. 2. Claims 7 and 12 require "a metal thin film resistive layer attached to the substrate." Nishiguchi teaches that the heat generating resistor (12 in Figure 1) has a composition of $Ti_xSi_yO_z$. This is an oxide, not a metal as required by claims 7 and 12.

Claims 7 (and claim 12 depends from claim 7) include the limitation "chip resistor termination." This further distinguishes over Nishiguchi. The prior art cited relates to thermal heads, not chip resistors. Therefore, the prior art cited cannot disclose a chip resistor termination. Therefore it is respectfully submitted that these rejections should be withdrawn, and the Examiner should find all claims allowable.

No fees or extensions of time are believed to be due in connection with this amendment; however, consider this a request for any extension inadvertently omitted, and charge any additional fees to Deposit Account No. 26-0084.

Reconsideration and allowance is respectfully requested.

Respectfully submitted,



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AMENDMENT — VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Claims

7. (Thrice Amended)

A thin film chip resistor comprising:

a substrate;

a metal thin film resistive layer directly attached to the substrate, the metal thin film layer being non-tantalum;

a chip resistor termination attached on each end of the metal thin film resistive layer; and

an outer moisture barrier consisting of tantalum pentoxide directly overlaying and attaching to the metal thin film resistive layer for reducing failures due to electrolytic corrosion under powered moisture conditions.

13. (Thrice Amended)

A nickel-chromium alloy thin film chip resistor comprising:

a substrate;

a nickel- chromium alloy thin film layer directly attached to the substrate;

a chip resistor termination attached on each end of the nickel-chromium alloy thin film; and

an outer moisture barrier consisting of tantalum pentoxide directly overlaying and attaching to the nickel-chromium alloy thin film layer for reducing failures due to electrolytic corrosion under powered moisture conditions.

15. Twice Amended)

A nickel- chromium alloy thin film resistor comprising:

a substrate;

a nickel-chromium alloy thin film layer directly attached to the substrate;

a passivation layer directly overlaying and attaching to the nickel-chromium alloy layer; and

an outer moisture barrier consisting of tantalum pentoxide directly overlaying and attaching to the passivation layer for reducing failures due to electrolytic corrosion under powered moisture conditions.

Please add new claim 16 as follows:

16. (Amended)

A thin film resistor comprising:

a resistor substrate;

a metal thin film resistive layer directly attached to the substrate, the metal thin film layer being non-tantalum;

a chip resistor termination attached on each end of the metal thin film resistive layer;

a passivation layer directly overlaying the metal thin film resistive layer;

an outer moisture barrier consisting of tantalum pentoxide directly overlaying the passivation layer for reducing failures due to electrolytic corrosion under powered moisture conditions.